PPL13 PROJECT NOMINEE FACT SHEET
March 12, 2003

Project Name: Havoline Canal Dedicated Dredging Back Barrier Marsh Creation

Coast 2050 Strategy
Regional: restore/maintain barrier islands; maintain shoreline integrity; marsh creation.
Coastwide: marsh creation, maintain shoreline integrity, vegetative plantings, restore ridge functions.
Mapping Units: protect bay/gulf shorelines; protect bay/lake shorelines; beneficial use of dredged material.

Project Location
Region 3, Terrebonne Basin, Terrebonne and Lafourche Parishes, This project is located in Terrebonne and South Bully Camp Marshes Mapping Units just north of Timbalier Island Shorelines Mapping Units.

Problem
The interior islands in the open water portion of both mapping units (Casse-Tete, Calumet, East Timbalier, Brush Island, Timbalier, Caillou Island) are exposed to wind/wave action from storm related events and are experiencing high rates of land loss. Islands such as Timbalier and East Timbalier have been slowly migrating to the northwest as storms and overwash events erode the beach. As the islands have migrated they have decreased in width, height and area.

Goals
This project is proposed to create back barrier marsh on the Casse-Tete Islands by hydraulically dredging or mining material from Timbalier Bay.

Proposed Solution
The project is designed to create back barrier marshes on the Casse-Tete Islands by hydraulically dredging or mining material from Timbalier Bay. The approximately 2,500,000 cubic yards of material obtained from dredging six borrow cells at 1.75 miles long each with 0.25 mile gaps between them. The dredge material would be confined by temporary earthen retention dikes. It is anticipated that approximately 27,700 feet of marsh with an approximate width of 500 feet and an approximate elevation of one foot could be constructed behind these islands. Construction of these back barrier marshes will widen island sections promoting the stability and long-term survivability of these sections of the island. This project will create approximately 315 acres of marsh habitat. Restored areas would be planted with typical island vegetation.

Preliminary Project Benefits
This project will create approximately 315 acres of marsh habitat. Island cuts and breaches would be prevented which would help to prevent sediment loss from the barrier island system into deeper Gulf or bay waters. Prevention of increase in wave heights would occur in back bays to result in reduction of inland marsh loss. This project would

function in concert with other proposed rehabilitation measures for the area including barrier island restoration, wave absorbers along bay shores, and river water and sediment diversions in the upper sub-basin. Hurricane storm surges would be reduced and communities protected.

Compatibility with Coast 2050 Criteria

Wetland Elevation/Sustainability
What project features achieve sustainability through vertical accretion? Which protect self-sustaining wetlands? How many net acres of accreted wetlands are sustained over project life? 315 acres.

Ecosystem Influence Area
How much total area does the project beneficially affect, both directly and indirectly? Direct benefit would be approximately 315 acres of material placed onto the barrier island known as Casse-Tete. Indirect impact area is not known at this time.

Structural Framework
Which project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc. Over what portion of the ecosystem influence area? For how long? Temporary earthen dikes would be constructed to create marsh on the back of the island. The ecosystem area impacted is not known at this time.

Infrastructure
What is the net impact of the project on critical and non-critical coastal infrastructure within the ecosystem influence area? The addition of material being placed on Casse-Tete Island would be beneficial in bolstering the barrier island and its wave reduction functions during storm events. Some shoreline protection benefits could be realized but the quantity is not known at this time.

Organism and Material Linkages
Does the project allow a natural level of exchange of organisms and materials consistent with the sustainability of the ecosystem? The project allows a natural level of organism and material exchange consistent with the sustainability of the ecosystem.

Coast 2050 Habitat Objectives
To what extent does the project achieve the Coast 2050 Habitat Objectives found on Figures 7-1, 7-4, 7-7 and 7-10 in the Coast 2050 Report compared to the habitats in Chabreck '88? Casse-Tete Island would be temporarily bolstered by the addition of material however concern does exist with the deepening of the channel to obtain the material to bolster the island. Channel deepening in order to acquire material to build marsh or barrier islands does not seem consistent with Coast 2050 habitat objectives for most of the ecosystem influence area.

Project Synergy

To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? The project may meet 2050 criteria for nourishing the barrier island system in the project area but some concern exists with the deepening of a navigation channel on the interior of the island chain. The salinity regime in this area would have to be studied further to answer these sorts of questions.

Preliminary Construction Costs
The estimated construction cost including 25% contingencies is $7,500,000.

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